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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/807,099 | 03/23/2004 | Jianmin Shi | ARL 04-17 | 2520 |

21364 7590 11/09/2005

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| EXAMINER |
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GARRETT, DAWN L

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| ART UNIT | PAPER NUMBER |
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1774

DATE MAILED: 11/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/807,099 | Applicant(s) SHI ET AL. | |
| | Examiner Dawn Garrett | Art Unit 1774 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to the amendment filed August 29, 2005. Claims 1-7 have been amended. Claims 1-11 are pending.
2. Applicant's representative has requested a spelling correction of inventor Jianmin Shi's name. The spelling has now been corrected in the application's electronic file listing of the inventor names and in the Office's P.A.L.M. records system.
3. Applicant should insert the application number of the commonly-assigned application referred to the specification in the first paragraph of the specification by amendment if that application number is now known.
4. The objections to claims 2-7 set forth in the last Office action (mailed May 13, 2005), paragraph 1, are withdrawn due to the amendment.
5. The rejections over claims 2-7 under 35 U.S.C. 112, second paragraph, set forth in the last Office action, paragraphs 2-5, are withdrawn due to the amendment.
6. The rejection of claims 1, 5, and 7 under 35 U.S.C. 102(e) as being anticipated by Sotoyama (US 2005/0048313 A1) set forth in the last Office action, paragraph 7, is withdrawn due to the amendment which excludes a substitution with arylamino.
7. Claims 1-11 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Jarikov (US 2004/0076853 A1). Jarikov discloses organic light-emitting diodes with improved operational stability (see title). The devices include a substrate, an anode and a cathode and a luminescent layer between the anode and cathode. The luminescent layer includes a host and at least one dopant. The host includes at least two components (see abstract). A preferred material

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for the first host component includes formula (i) (see par. 1432), which reads upon the basic skeletal structure of the formula of claim 1. The skeletal structure may comprise substituent groups R1 through R12 which are individually groups such as hydrogen, fluoro, alkoxy, aryloxy, alkyl of from 1 to 24 carbon atoms, aryl of from 5 to 30 carbon atoms, substituted aryl, heterocycle groups, amino containing groups, and cyano (see par. 1434). Although Jarikov does not exemplify formula (i) compounds wherein at least one substituent group is not hydrogen, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed compounds according to claims 1-11, because Jarikov teaches the substituent groups for formula (i) required by claims 1-11.

Response to Arguments

8. Applicant's arguments filed August 29, 2005 have been fully considered but they are not persuasive.

With regard to the arguments over Jarikov, applicant states "Jarikov teaches the use of anthanthrene molecules as the first component of an aggregate used to improve the transport electrons or holes or both. Based on fundamental principals, molecular aggregates will not emit light because of self-quenching." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a different use of the anthanthrene derivatives) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner submits that Jarikov teaches derivative comprising skeletal formula (i) per the formula disclosed by applicant in a luminescent layer of an electroluminescent device.

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Applicant argues the Jarikov formula (i) compounds are part of an aggregate, but the examiner notes that applicant's claims do not expressly exclude an aggregate in the luminescent layer. The properties of the claimed formula are deemed to be inherent in the formula (i) compounds taught by Jarikov. The Jarikov reference clearly teaches the derivative according to applicant's formula is used in the luminescent layer. Applicant's claims do not exclude further components such as a host matrix material from being present in the luminescent layer. The rejection over Jarikov is respectfully maintained.

Conclusion


9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dawn Garrett
Primary Examiner
Art Unit 1774

November 7, 2005